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A REVIEW OF DR. M. GAY'S STATEMENT OF DR. CHARLES T. JACKSON'S CLAIMS TO THE DISCOVERY OF THE INHALATION OF SULPHURIC ETHER, AS A PREVENTIVE OF PAIN.

By J. B. S. Jackson, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

It is certainly very remarkable, considering the number of articles and pamphlets that have been published upon this great discovery, that scarcely anything has appeared in the name of Dr. Jackson; and it is not surprising that he should thus be deprived of much of the credit to which he is entitled. And even now, when a full statement is for the first time made of his claims, it comes not from himself. Dr. J. felt, when the discovery was first made known, that his claims could not be questioned, and that those with whom he was concerned, would, without his demanding it, give him full credit; but it was not so, and from that time his mind has been so harassed by misrepresentations and false statements in regard to the case, that he has felt no inclination to do what he should have done more than six months ago. Dr. Martin Gay, who has now published a vindication of Dr. Jackson's claims, has been for many years a warm personal friend of Dr. J., and he has generously, and of his own accord, come forward to state his case and plead his cause; after a long and laborious investigation, and a tedious sifting of all the facts, he has given a full exposition of the whole subject, and has added, in an appendix, the testimony upon which it is founded; and it is to be hoped, in justice to the cause of friendship and of science, that it will be attentively read and considered.

Dr. Gay shows, by the testimony of Mr. Bernis, a most respectable dentist of this city, that Dr. Jackson had conceived the plan of preventing pain in surgical operations by some direct and new agent, as long ago as the year 1842. Mr. B. remembers and testifies, also, to a remark made by Dr. Jackson at that time, that he had tried this agent successfully upon himself after some accident, and he has no doubt that sulphuric ether was the means referred to. His operations, however, fortunately for his patients, are so far painless, that he did not feel any urgent need of the means referred to by Dr. J., and so did not burden his memory particularly with the fact. Dr. Wm. F. Channing, however, states that he had on several occasions heard Dr. J. speak of the inhalation of sulphuric ether, as a means of producing insensibility to pain during surgical operations, and that his impression is very strong that the earliest communica-

tion on this subject was in the year 1842, Dr. C. being on a geological survey with Dr. Jackson, when the above remarks were made to Mr. Bemis.

Another important point that is dwelt upon by Dr. Gay, is Dr. Jackson's use of the sulphuric ether to relieve the very urgent distress which he experienced after an accidental inhalation of chlorine gas ; a distress, which was quite as agonizing, as every chemist must know, as the pain inflicted by the surgeon's knife. This was in the winter of 1841-2, and the relief which he experienced was such as to produce in his mind a strong conviction, that the pain of a surgical operation might be relieved in the same way ; the insensibility to the painful effects of the chlorine coming on, according to Dr. Gay, before the unconsciousness, and continuing for a time after it had passed off. Dr. Wm. F. Channing, a student of chemistry with Dr. J., and a son of the late Rev. Dr. C., afterwards met with a similar accident, and, as is shown in his testimony, inhaled the sulphuric ether with an equally good effect. Previously to the first of these trials, Dr. J. had inhaled the ether with a view to observe its physiological effects, being perfectly aware of its having been often used as an intoxicating agent, and of the danger which was supposed to attend its use if carried to the degree of unconsciousness. For this experiment under such circumstances, and for having discovered the laws of the insensibility or unconsciousness, which is produced by the inhalation of sulphuric ether, as a matter of science, and independently of its application to surgery, Dr. Jackson is entitled to the highest credit.

Dr. Gay then goes on to refer to the testimony of Mr. Joseph Peabody, than which nothing could be more conclusive and satisfactory. Mr. P. is a student of chemistry with Dr. Jackson, and in the month of February, 1846, was about to have two of his teeth extracted. The idea of trying the powers of mesmerism having occurred to him, Dr. J. dissuaded him from it, and, in so doing, used an expression the strength of which is remarkable. "If you want to have your teeth extracted without pain," said he, "I have mesmerism bottled up, in the other room," and then told him of the sulphuric ether, of its effects, and how it should be used. Mr. P. would have used it, and was preparing some for that purpose at his father's laboratory in Salem, when his father remonstrated so strongly against it as a dangerous experiment, that he abandoned the idea ; otherwise the whole discovery would probably have blazed forth a year ago.

Dr. Jackson, then, believed fully in the power of the sulphuric ether as a preventive of pain, when Mr. Morton called at his laboratory last September to borrow a gas bag ; this he intended, as he said, to fill with atmospheric air, and giving it to a patient to inhale, he hoped thus to act upon her imagination, and induce her to submit to the extraction of a tooth. Dr. J. dissuaded him from this attempt, and, after some conversation, communicated to him his ideas in regard to the ether. Mr. M. was evidently entirely ignorant of the article, and even of its physical properties, as Dr. Gay shows. He asked a great many questions, and showed a great unwillingness to try it, but at last agreed to do so, Dr. J. giving him particular directions as to the mode of applying it, and telling him

what was to be expected. Mr. Morton accordingly made the trial, and the result we all know. Having stated these facts, Dr. Gay goes on to remark that Mr. Morton acted merely as an agent of Dr. J., and shows that "the credit to which he is really entitled, is that of faithfully performing, according to his instructions, a mechanical part in an experiment of Dr. Jackson's." Dr. J., of course, never denied that Mr. Morton first used the ether successfully in a case of dental surgery; but inasmuch as this was done under Dr. J.'s direction, and by a person who was totally ignorant of the subject, the whole responsibility in the case, and the credit or discredit which might grow out of it, belonged exclusively to Dr. J., who must be considered not merely as the discoverer, but as having made the first application in the proper sense of the term. If Dr. Jackson, however, is to receive the credit of the discovery, as a scientific man, let Mr. Morton have all that belongs to him for the perseverance which he showed in the case, acting under Dr. Jackson's directions, and supported by many successful experiments, but liable to be discouraged by repeated failures, and the bad consequences which not unfrequently resulted from his reckless use of the new agent. And here it may be remarked that the title usually given to Mr. Morton has been withheld, as an act of justice to those gentlemen in his branch of our profession who have devoted their time, and expended their money, to acquire the information which would enable them to obtain a medical degree.

Dr. Jackson has been very much blamed for not giving to Mr. Morton more credit in his letter to M. Elie de Beaumont, which was read to the French Academy; a second and a private letter, however, was at the same time sent to his correspondent, in which he gave a full history of the discovery, awarding to Mr. M. all the credit that had, at that time, ever been claimed for him, and acknowledging fully the important suggestions that others had made in regard to the construction of the instrument which was to be used in the inhalation of the ether. But Dr. J. had observed the position which Mr. Morton had already taken towards himself, in regard to the discovery, and he accordingly, in the letter above alluded to, stated simply what concerned himself in the discovery, that he had become convinced by experiments and reflection upon the subject that the inhalation of ether would render one insensible to pain, that he had induced a dentist of this city to use it, and that the result was as all the world knows it to have been. Dr. J. has been severely criticised for the use of the term "induced" in that letter, but of all terms it was the most fit. He did not call upon Mr. M. to make known his discovery and request him to make a trial of it, it is true; it was in Dr. Jackson's office that Mr. Morton received the important information. But what did Mr. Morton call upon Dr. J. for? Not for sulphuric ether, certainly; not for the nitrous oxide, not for a means of any sort to prevent the pain of the operation which he was about to perform; his plan was entirely different; it was simply to act upon the imagination of his patient, and he called upon Dr. J. to obtain the means which would enable him to carry his object into effect. From this Dr. J. dissuaded him, and after much time had been spent, and the

strongest assurances had been given of the safety of the inhalation of the sulphuric ether as a means of preventing pain, Mr. M. was "induced" to try it, and his distrust and the unwillingness which he showed to receive the idea, fully justified Dr. J. in the use of the term in question. And, to refer to another point, that strong persuasion was used by Dr. Jackson to induce Mr. Morton, after his first experiment, to bring the subject before the Surgeons of the Massachusetts General Hospital, is abundantly proved by the testimony which Dr. Gay has brought forward, Mr. Morton, when he did so introduce it, representing it as his own discovery, and giving to Dr. Jackson, as appears by a published letter of Dr. J. C. Warren, none of the credit which belonged to him.

Dr. Gay, then, having shown the object of Mr. Morton's visit to Dr. Jackson, remarks in another place upon Mr. M.'s experiments with chloric ether. Witnesses have testified to the fact of Mr. M.'s having used "ether" by inhalation, in the summer of 1846, and, although the only one who specifies the kind of ether used, speaks of it as the "chloric of ether," Mr. M.'s agent has the boldness to assert in his pamphlet that Mr. M. had been experimenting with sulphuric ether. There is no reason whatever to suppose that Mr. Morton had ever seen sulphuric ether before Dr. Jackson showed it to him, and, as to the idea of inhalation, he was probably indebted for that to his former partner, Mr. Wells.

The claims of Mr. Wells are very satisfactorily answered by Dr. Gay. That gentleman was undoubtedly, according to his statement, on the very verge of making the grand discovery, and even went so far, in Nov. 1844, as to use sulphuric ether in the case of a surgical operation; but, although he does not say so, the experiment must have been unsuccessful, as he was advised, in preference to this, to continue the use of the nitrous oxide, with which he had previously been operating with some success as a dentist. This operation, be it observed, was performed two years after Dr. J.'s communication to Mr. Bemis. Dr. G. alludes to Sir H. Davy's having suggested the use of this gas in small operations, and he refers to a case in which it was also tried several years since, by some of the Cambridge students, the result being such as might have been expected; this gas, from the violent excitement which it often produces, is totally unfit for surgical purposes, and Mr. Wells might, therefore, be welcome to the discovery, even if he had been the first person to use it. Mr. W. claims to have been the originator or discoverer of the idea of preventing pain by the inhalation of any gas whatsoever, because he had been searching for some means to produce this effect, and had in a few cases operated successfully with nitrous oxide; but such a claim, at this late day, is perfectly preposterous, and, as Dr. Gay remarks, sulphuric ether was virtually excepted by Mr. Wells, after the experiment above alluded to; nitrous oxide, if it ever had any repute, would probably soon have been forgotten, had it not been for the discovery of sulphuric ether, and the very slight connection between these two substances—a connection which may truly be called gaseous.

Dr. Gay alludes to the censure which Dr. Jackson has incurred for having so long delayed to communicate his discovery to the world, and

the inference, that, although he may have had, for a long while, a floating idea in his mind of the fact, he could not have fully believed in the powers of the ether; but the testimony which is offered, proves that such was the fact, however it may be explained, and it cannot be imagined that after being once conceived, as it was by Dr. J., the idea could ever have been lost sight of. In his communication to Mr. Morton, Dr. J. did nothing more than what he had done several times previously, and would undoubtedly have done again. The man of science often discovers, in his closet or laboratory, some new fact or principle, which, when applied, will be of inestimable value to mankind; and it but too often happens, from the peculiar constitution of scientific minds, that he, to whom the world is most indebted, reaps but little benefit, and in many cases fails even to secure to himself the honor of the discovery. Now after it has been shown that Dr. Jackson had been long possessed of the idea of preventing pain by the inhalation of sulphuric ether, and that it was first successfully applied under his directions, will any one allege that too much has been claimed for Dr. J. as a discoverer? Shall that honor, which is all that he claims, be denied to him, because he did not make known his discovery in the most proper manner? Dr. J. states that he did communicate it to several of his friends, but unfortunately for his case, he cannot say to whom, and it was only accidentally that he heard of Mr. Bemis's recollection of their meeting in the year 1842, and of what passed between them on that occasion, Dr. J. himself having entirely forgotten that he had ever spoken to Mr. B. upon the subject of a preventive of pain in surgical operations. This is a single case, and there may be many others, which may yet become known.

Further, it has not merely been questioned whether Dr. Jackson really believed in the sulphuric ether as a preventive of pain before he communicated the idea to Mr. Morton, but it has been said, and by many persons believed, that even after it had been in use for some time, he doubted its powers. This would seem to be impossible, when we consider the strength of his conviction previously to the first experiments in surgery, and the overpowering evidence that was every day accumulating in favor of the new agent. There cannot, in fact, after the testimony of Mr. Peabody, and the recollection of many of Dr. Jackson's friends, be a doubt "that he has continued," as Dr. Gay remarks, "unfaltering in his belief in the safety and ultimate success of the application"; he has, of course, as Dr. Warren and many others have done, often spoken of the caution necessary to ensure the efficacy and the safety of the application, and without doubt some remark of this sort was misunderstood, and gave rise to the report now alluded to.

Dr. Jackson has been much blamed for having published in the *Daily Advertiser* a statement of his claims, which, from its address, would seem to have been already communicated to the *American Academy*, when, in fact, it was not read before that body until the evening of the following day. He was desirous, it has been said, of giving greater effect to his article, by bringing it out under the sanction of the *Academy*. Now the article in question was hastily prepared, and was expressly in-

tended to be sent to Europe by the steamer of the first of March, with a view to correct the unfavorable impressions which had gone abroad in regard to his claims; but, inasmuch as he had been requested to make a communication upon the subject to the Academy, his intention was, to read the same article before that body, and he addressed it accordingly, having no doubt that he had a right, so far as the Academy was concerned, to publish his article before it was read, and certainly having no intention of giving to the public the idea that the Academy had sanctioned his claims, the circumstance of the address, which certainly requires an explanation, being entirely accidental, and owing to the haste with which the article was prepared.

With regard to the patent, Dr. Gay shows that Dr. Jackson reprobated the idea as strongly as any one, that he has never before taken such a course in respect to any scientific discovery, and that in the present case he felt himself compelled to adopt it, being informed that Mr. Morton could and would take out a patent in his own name, and claim the whole discovery, if Dr. J. did not join him. The Dr., therefore, in an unfortunate moment, signed the petition with Mr. M. for a patent, as a joint discoverer, and with a view merely to have his name legally connected with it, Dr. J. understanding that the patent was to be made out in the name of Mr. Morton, and that he was to be the sole proprietor. If it was settled, however, that the patent would be applied for, and that Mr. Morton would, if he could, make money out of it, certainly Dr. J. had a right to expect him to pay a proper fee for the professional advice which enabled him to do this; he charged him, therefore, five hundred dollars, but afterwards changed it to ten per cent. on the receipts, Mr. M. saying that he might, perhaps, never make the above sum by it. Dr. Jackson deeply regrets that he ever had anything to do with the patent; and this hasty and very imperfect notice of his claims as a discoverer, may be concluded by stating, on Dr. Gay's authority, that he never has received any pecuniary advantage from the patent, that he never will receive any, and that he has destroyed the bond given to him, according to which Mr. M. was to have paid to him a certain per centage of the profits that might be derived from the sale of the patent right.

THE TREATMENT OF TETANUS.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—Although I cannot write on medical subjects in a manner satisfactory to myself, yet a desire to draw from others, contributors to your Journal, any information which they may be able and willing to impart, induces me to present the following cases of that terrible disease, tetanus, together with the empirical, and yet in some instances successful, treatment pursued.

About fifty years ago, the first case of tetanus of which I have any personal knowledge, occurred in the town of Worcester, my native place. A Mr. Stow, in that town, received a punctured wound in the thumb, from a rusty

mail. In a few days he was seized with spasms, and fell under the care of a very respectable physician of that town, Dr. John Green. The patient obtaining no relief, one or two other physicians were called in consultation. Not succeeding, with the prescribed remedies, in procuring any abatement of the spasms, the patient was at length allowed to indulge in potations of ardent spirits, in compliance with his own wishes. He drank largely of flip, made with N. E. rum. This very soon mitigated, and finally removed, for the time, the frightful malady. Mr. S. afterwards found himself liable to returns of the disorder, and, as he himself informed me, when he perceived the premonitory symptoms, would swallow, at a single draught, a quart of N. E. rum, and always with the effect of warding off the spasms. He assured me that no intoxicating effect was ever perceived by him from that quantity of rum, on such an occasion. Nevertheless, although Mr. S. had never, since the first attack, experienced anything more than the precursive symptoms of the tetanic affection, he yet, about fifteen years ago, had so far lost all muscular power, that he could not raise his feet from the floor, but could only move by sliding them along upon it.

Taking a hint from this case, I resolved on making a trial of ardent spirit in the first case of the kind that occurred in my own practice. This was about thirty-five years ago, and happened in Townshend, Vt. A young lady received a deep burn in the palm of one of her hands. While it was yet an open sore, she was exposed to cold and dampness, and very soon had a most severe attack of tetanus. On the second or third day from its commencement, I was invited to visit her. I never have witnessed so firm and rigid a contraction of the muscles. They felt as hard as stone, particularly the buccinators. The head and feet nearly touched each other, with but occasional slight relaxations. I immediately commenced feeding her with raw rum, which I was enabled to do with a spoon, through an opening left by the extraction of two front teeth. I got down nearly a pint before any effect was perceived. A crack was then suddenly heard to proceed from the jaw; soon another, and another, and after a while it was perceived that her mouth was opening. This continued until the jaws were nearly an inch apart. They then began to close again, a little at a time, each motion of the jaw reporting itself with a smart crack. After the jaws had thus been several times opened and closed, involuntarily, the muscles began to *obey* the will, and the spasms subsided. In despite of the rum, however, which was still administered so as to keep up a slight intoxicating effect, the spasms returned, though with much less severity, and did not wholly quit the patient until the system was brought under the influence of mercurials, which were given, with opium, and the rum laid aside, after the latter had been used about twenty-four hours. The recovery from tetanus was complete, but the patient was found entirely to have lost the sense of hearing, and never regained it.

After this I was led to suppose that the application of cold water might be better treatment than I had as yet pursued. I accordingly had a pailful or two poured upon a lad who was suffering under the spasms,

induced by a punctured wound in the tendon of the extensor muscle of the thigh. He was wrapped in a warm blanket, as soon after the water was applied as he could be wiped over with towels, and laid in bed. In a few minutes, however, he expired! and I have never since dared to repeat such an expedient.

Succeeding this case, which happened twenty-four years ago, I made trial of laudanum, in a case of idiopathic tetanus, induced, in a female, by exposure during the menstrual flux. I began with teaspoonful doses, and, after giving several with no apparent effect, I gave it by the tablespoonful until she had taken six doses. Seeing no effect at all from it, I had an injection of tobacco administered, which afforded speedy relief.

Later still, I treated a young man, laboring under traumatic tetanus, with oil of turpentine, in teaspoonful doses; then with ardent spirits; then with wine and laudanum; cauterized the whole course of the spine with kali purum; gave occasional cathartics of calomel, castor with croton oil, castor with turpentine oil, &c. &c. The patient recovered, but whether in consequence of any or all of the above mentioned remedial means, I know not, and would not like to hazard a conjecture.

Since the occurrence of this case, I had a case which proved fatal in less than four days, from the infliction of a wound in the bottom of the foot, by the patient, a lad six or seven years old, treading upon a board nail. Oil of turpentine, the rind of salted pork, ley poultices, landanum, &c., were applied to the wound; diaphoretics and anodynes were administered internally. Until near the fatal termination, no symptoms of trismus or general spasms were noticed. A low, febrile, sinking, typhoid state of the system seemed to prevail. But trismus and general spasms at length became manifest, and no means that were used for his relief seemed to have the slightest effect.

I have been concerned in other tetanic cases, but those related sufficiently exemplify the whole. Injections of tobacco have more frequently afforded relief than anything I have tried, but that relief has seldom been permanent. Cauterizing, with kali, the whole course of the spine, seemed to be of use in the only case where I tried it; but probably an epispastic applied to the same extent, or any other counter-irritant of equal power, would have effected an equal amount of benefit.

On the whole, Mr. Editor, I am not satisfied with any view or treatment of this disorder, which has as yet obtained among us, and ask such of your correspondents as may have facts of importance, or theories founded on facts, in relation thereto, to communicate them for the common good.

JOHN BROOKS.

Bernardston, June 10, 1847.

THE SPIROMETER AS A MEANS OF DIAGNOSIS.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR.—Having just finished the perusal of a late No. of the Medico-Chirurgical Transactions (No. 29), my attention has been closely

rived to a paper therein communicated, which appears to be unique and very valuable, from the pen of John Hutchinson, Surgeon. It is entitled, "On the Capacity of the Lungs and on the Respiratory Functions, with the view of establishing a precise and easy method of detecting disease by the Spirometer," read before the Royal Medical and Chirurgical Society of London, April 28th, 1846. If there has not been any extended notice of this paper by our journals, it has occurred to me that it would be not unacceptable to give it such an one at least as would arrest the attention of those in our profession who interest themselves in its advancement; the number of whom, "on this side of the water," I am led to believe is not small. Your Journal has so wide a circulation, and has always exhibited such a commendable spirit of keeping your readers (referring particularly to those who have not ready access to the more expensive sources of information) promptly informed of all that may be new or interesting in the medical cabinets, that I am induced to suggest this matter to you. It may be that you have already published something in reference to this. But as I do not recollect of having seen anything of the kind, and as it may not have fallen under your eye, I here-with send you some extracts from said paper. Proffering my good will to your Journal and our common cause of medical advancement, I remain

Your obedient servant,

G. O.

Danvers, June 15th, 1847.

157. I shall briefly state my own experience of the spirometer as a means of diagnosis, that others may have an opportunity of confirming or refuting my conclusions, and shall assign the reasons why I believe its application useful.

158. It will be seen that an investigation has been made upon upwards of 2000 persons, the great bulk of whom are considered as belonging to the healthy classes of society, which will necessarily place us in a position for judging between the healthy and diseased.

159. The range of observations made upon the diseased, is very limited compared with those upon the healthy; but this, if anything, makes the test stronger, as one disturbing case amongst few is more prominent than one amongst many.

160. These observations are of two kinds, one measuring *quantity* and the other *power*; the quantity of air breathed, and the power of the respiratory act—both extreme efforts.

161. The measuring of quantity or vital capacity is most useful in private practice—the measuring of the respiratory power (is most useful) in selecting men for the public service. To determine the presence of disease and the presence of health requires a distinct series of observations, the duties in civil and military life being different.

162. It has been seen (42) that healthy men have a vital capacity which differs according to certain physical variations, while those men physically the same have the same vital capacity.

163. A difference of vital capacity in men of the same physical development can only be accounted for as the effect of some cause, and that, most probably, disease.

[Mr. Hutchinson then presents us with 164—2d Table—containing about 30 cases of phthisis pulmonalis which he has experimented upon, giving the vital capacity of each, in the healthy state, in the early stage of the disease, in the advanced stage, and then says—]

166. The healthy range, with the exception of the highest, is taken from men of the same physical development, being the mean of some hundreds of observations, the standard of health. The highest case is Freeman, the "American giant," as compared with himself at different times.

167.

168. This man came over to England in 1842, in the November of that year, trained for a prize-fight; I examined him immediately before his *professional engagement*, when he might be considered in the "best condition." His powers were as follows:—Vital capacity, 434 cubic inches; height, 6 feet 11 $\frac{1}{4}$ inches; weight, 19 st. 5 lb.; circumference of his chest, 47 inches; inspiratory power, 5.0 inches; expiratory power, 6.5 inches. In November, 1844, exactly two years afterwards, he came to town in ill health. I then examined him in the same way as before, twenty times at various intervals, during which his vital capacity varied from 390 down to 340, and the mean of all the observations was 344 cubic inches, a decrease of 90, or more than 20 per cent.; his respiratory power had decreased one fifth, and his weight two stone. At this time I took him to two physicians well skilled in auscultation, and they both affirmed that they could *not detect* any organic disease. After January, 1845, I lost sight of Freeman, and in the October following, I was kindly favored with the following account of him from Mr. Paul, Surgeon to the County Hospital, Winchester.

169. "Freeman was admitted into this Hospital on the 8th of October, in an extreme state of debility and exhaustion; he was reduced almost to a skeleton, complained of cough, and was expectorating pus in large quantities. Percussion on the anterior part of the chest, *under the clavicles*, gave, on the right side, a very dull sound; on the left one, much clearer, but still I think less resonant than natural. I made but one attempt at auscultation, but could come to no conclusion, from a rather singular reason—the ribs were so large, the intercostal spaces so wide, and so sunk in from the extreme state of emaciation to which Freeman was reduced, that I could not find a level space large enough to receive the end of the stethoscope; could not, in short, bring its whole surface into contact with the chest. Freeman's great debility, and the clearness of the diagnosis from other sources, prevented my repeating the attempt. Freeman, after death, measured 6 feet 7 $\frac{1}{2}$ inches, and weighed 10 stone and 1 lb. On opening the chest, the lungs on both sides were found adhering by their apices to the superior boundaries of the thorax, and studded throughout their substance with tubercles."

170.

171. The spirometer was useful to me in this case, by indicating the commencement of the disease which ultimately caused his death, and that *before* the usual means availed.

Another good illustration I may relate. A surgeon called upon me in full practice ; he looked in *perfect health*, and said he was so. I measured his vital capacity, and found it 100 cubic inches below the healthy standard. Four months afterwards I heard he was ill, and that auscultation had given evidence of phthisis pulmonalis ; a few months afterwards he died of that complaint. This gentleman looked so remarkably well when I first examined him, that I was led to doubt the extent of reliance to be placed upon the spirometer, but the result entirely removed this doubt.

172. Another gentleman, holding an elevated position under government, manifested a great deficiency of vital capacity, and that, too, when performing his duties ; but within four months his death took place, and extensive tubercular disease was found in the lungs.

Another case presented itself in one of the men (J. S.) in the Queen's Company, Grenadier Guards. His height was 6 feet 4 inches ; his vital capacity only 102 instead of (at least) 300 cubic inches. This man was given to me as a healthy case, but I classed him among the diseased ; and upon inquiry, it was found that he had previously solicited to be relieved from certain physical duties. This is not the only case of low capacity in that regiment.

173. The last case I shall mention of this kind was a young man of 11 stone, and 5 feet 7 inches high, firm and muscular ; his vital capacity was 47 inches below the mark. Within one week from this time I had an opportunity of examining his lungs, and found the left lung at the apex studded with miliary tubercles, the whole not extending beyond a square inch ; the entire remaining portion was to all appearance healthy.

174. I have also had cases of a converse nature. A man who had gone the round of the principal hospitals, looked so ill that I selected him as a case for illustration of phthisical disease, but I found his vital capacity exceeded the healthy standard. I inquired about him eight months afterwards, and was informed that he had returned to work, and was *well*. A jeweller called upon me one day, and said he was told he had consumption, and having a large family, his mind in consequence was much depressed. I found his vital capacity exceed the natural or healthy mean ; an explanation of the circumstance relieved the man's mind, and in four months he had so increased in weight and strength, that all his apprehensions were removed. I will not take up the time of the Society by relating other cases.

175. These results are no more than might be expected. It is evident that if a man breathe 200 cubic inches of air at 98, in his lungs there must be 200 cubic inches of space for air. It is also certain that if this man expel at another time from his chest 20 *per cent. minus* that, some cause must produce this effect. It may be in the lungs, or it may not — the spirometer being a gauge in a two-fold sense, a measure for mobility as well as a measure for capacity — [which Mr. H. goes on to elucidate.]

181. I do not bring this forward with any view of superseding or precluding other physical means of examination, but, on the con-

trary, I wish to multiply physical means of observation, because all the deviations of form and volume of the great cavities indicating some abnormal state, are but too much obscured for want of more extended means of definitely examining them.

182. It will have been observed that the result of the examination of the diseased cases which I have given, particularly that of Freeman's, was to induce a conviction of the usefulness of the spirometer in an early stage of disease, more particularly in phthisis pulmonalis; and it may be asked, How is it that the difference of the vital capacity should be so great, and the organic disease apparently so little, as not to be detected by the ear? I cannot answer this question with certainty; but I feel strongly disposed to believe that a very small deposition of tuberculous matter will cause a considerable deficiency in the vital capacity.

Before I conclude, I may venture to draw the attention of those connected with insurance offices to the matter of this paper. Thus, the state of a man examined, and appearing like the three first cases in table x., would admit of little doubt but that such was an assurable life, while the other cases would be suspicious. From such a table of facts, any man can form his own judgment of a case, without being dependent on the opinion of another.

[Mr. Hutchinson concludes his interesting paper of about 120 pages, with the following.]

The matter of this communication is founded upon a vast number of facts—immutable truths, which are infinitely beyond my comprehension. The deductions, however, which I have ventured to draw therefrom, I wish to advance with modesty, because time, with its mutations, may so unfold science as to crush these deductions, and demonstrate them as unsound. Nevertheless, the facts themselves can never alter, nor deviate in their bearing upon respiration—one of the most important functions in the animal economy.

CAJEPUT OIL AS A REMEDIAL AGENT.

To the Editor of the *Boston Medical and Surgical Journal*.

DEAR SIR.—In submitting to your consideration the subjoined remarks upon the use of the ol. cajuputi, I am influenced less by the desire of communicating than eliciting information. I am not aware to what precise extent it has been used in this country, neither have I been able to learn the indications which other practitioners have found it to answer. The expense of the article, and the consequent temptation to adulteration, doubtless, have deterred physicians from using it to any great extent. This valuable oil is principally manufactured on the island of Buoro, and thence exported to Holland. From Holland it is re-exported to the United States, paying a heavy duty, which correspondingly enhances its price. At the distilleries in Buoro and Amboyna, the oil is sold for about \$1 per bottle, averaging f 5 xxiv. each. But the

commerce being entirely monopolized by the Dutch, it is rarely that other nations can obtain it at this low rate. At Batavia, upon the island of Java, about 400 miles distant from Buoro, it is sold as high as \$5 per bottle. But I leave its history, to speak of its uses. Having obtained a couple of bottles of the pure oil direct from the Moluccas, I proceeded to experiment with the same whenever an opportunity offered in which I judged it could be used with advantage.

It was at first prescribed endermically for several cases of chronic rheumatism, which had hitherto resisted other treatment. Its success in these cases induced me to use it in others, which I have since done with like success. I should remark that the oil was applied freely, regardless of the restrictions so religiously enjoined by the Malays. From its almost instantaneous action in relaxing muscular spasm, in relieving spasmodic colic, and persistent singultus, I am induced to conceive that it operates directly upon the nervous system as a powerful antispasmodic. I have administered it in several cases of flatulent colic, and invariably with the happiest results. The effect has been instantaneous in relaxing the spasm, and the regurgitation of flatus has given immediate relief. A few drops, four to six, taken in water or upon a piece of sugar, will arrest the spasmodic action of the diaphragm in singultus, with the greatest certainty. Conjointly with its internal administration, fifteen or twenty drops may be applied externally to the epigastrium. Diluted with three or four parts of *ol. amygd. dulc.* I have found it an excellent application for deafness resulting from deficient or hardened cerumen. For this purpose a few drops of this mixture may be placed within the external meatus upon a dossier of cotton, while the pure oil is applied anteriorly to the ear, directly over the facial nerve. As an odontalgic it is far superior to the *ol. creosoti*, and, applied directly to the exposed nerve, often relieves the pain entirely.

But I am trespassing upon your patience, and forbear enumerating further indications, lest your readers suspect me of wishing to immortalize myself as the discoverer of another "golden drop." I confess my aspirations are not restricted to success in the practice of my profession, but compass the acquisition of those *golden drops* more essential to life than the far-famed elixir of Paracelsus.

In conclusion, allow me to suggest that, if I am correct in my views of the *modus operandi* of the article under consideration, might we not hope some more signal advantage from its use in colica pictonum, spasmodic cholera, tetanus, and other spasmodic diseases.

Southampton, L. I., June 11th, 1847. Respectfully yours,
J. A. PRESTON.

CONGENITAL HYDROCEPHALUS.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—A case of congenital hydrocephalus connected with spina bifida, or rather a fissure of the lumbar vertebrae, presenting the appear-

ance of a recent cicatrix of a burn, came under my observation this day. The head of the fetus measured $15\frac{1}{2}$ inches from the base of the occiput to the base of the frontal bone; from the top of one ear to the top of the other, $13\frac{1}{2}$ inches; round the head, $18\frac{1}{2}$ inches. The frontal, occipital and parietal bones were as large as usual in an eight months' fetus, but not connected, the sutures having separated and given way; the bones were detached and floated in the fluid, feeling like distinct, isolated flattened shells. The temporal bones appeared to be comminuted, attended with a crepitous feeling and sound.

The fissure in the lumbar region was $2\frac{1}{2}$ inches long and $1\frac{1}{2}$ broad. Varus of both feet.

There was an unusual quantity of liquor amni. Labor preternatural—feet presenting.

Boston, June 21st, 1847.

Yours, very respectfully,

S. B. JR.

[Dr. B. asks the question—Are cases of this kind of very common occurrence? Correspondents will contribute to the archives of the profession by answering him—and, if possible, he would like detailed circumstances and admeasurements.—ED.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JUNE 30, 1847.

A Review of Dr. Gay's Statement.—We have the pleasure of presenting to our readers a very interesting review of Dr. Gay's vindication of Dr. Charles T. Jackson's claims to the discovery of the applicability of sulphuric ether for the prevention of pain, and to its application in surgical practice, by Dr. John B. S. Jackson, an eminent physician of this city, who has recently been appointed Professor of Pathological Anatomy in Harvard University. It is proper to add that he is not, as might be supposed, related to Dr. C. T. Jackson.

Coastwise Health Excursion.—Proposals have been issued in Boston, for receiving invalids on ship-board, for a grand marine excursion on the coast of New England—a vessel of four hundred tons, perfectly equipped, even to the accompaniment of a surgeon—an essential matter—having been secured for the purpose. “The proposed voyage will occupy about six weeks. The price of Tickets will be \$100 for each Berth, including Board, the privilege of Boats, Lines, Baths, and every other convenience for enjoyment which the vessel affords. The number of Berths can in no case exceed one hundred; and no Berth will be considered as secured until a Ticket is taken; therefore those who wish to secure Berths, will do well to apply at once.”

From the Mail, we learn that “It is proposed to visit all the principal ports, islands, watering-places, fishing and fowling grounds on the New

England coast, from Nantucket and Cape Cod, 'all along shore' to the mouth of the St. Lawrence and the coast of Labrador, including the most famous resorts of the Mackerel and Cod-Fishing fleets, both English and American; affording the most abundant opportunities for exercising the 'fishing-rod' and 'shooting-iron,' for surf bathing and shore exercise, with the greatest possible variety of incident and scenery, on ship and shore."

An opportunity like this, for receiving the full benefit of sea air in perfect comfort and security, has never before been presented in this port. Medical gentlemen in the country should bear it in mind, for the sake of chronic patients. Ladies are not to be taken; not a female servant is to be admitted on board—which seems to be an unnecessary restriction, since all the first class vessels are so finished that ladies would have all the accommodations they might require. There would be many advantages in having them join the expedition—two of which would be, that feeble, sickly females would, themselves, derive incalculable benefit from the cruise; and their presence would also ensure decorum. Men, by themselves, and especially when valetudinarians, become morose, inattentive to the demands of the toilette—and, in short, they too often turn demi-savage, when without the wholesome, restraining influence which the presence of a well-bred woman imparts. It would give us much pleasure to call on the agent in behalf of persons desirous of joining the expedition, and make sure of a berth for them. Were the originators of this excellent sanatory scheme to modify their plan so as to permit gentlemen in bad health to take their wives with them, it would add greatly to their profit, and actually very much enhance the value of the undertaking. J. S. Houghton, No. 16 State Street, is the agent.

Tremont Medical School.—A new system, in regard to the study of medicine, is growing into favor in New England. Formerly it was the custom of practitioners to receive an occasional pupil; those who stood high in public estimation received the largest number, as it was naturally supposed that the opportunity of acquiring clinical knowledge of diseases was better with them than under the guidance of gentlemen of limited practice—very little being said or thought about the superior qualification of one man over another on the score of educational qualifications, or the advantages to be derived from choice libraries and fitting apparatus. When the students were gathered at the colleges for the autumnal lectures, they were strangers to each other, and it was a singular fact that no prescribed course of reading, calculated to prepare them for profiting most at an annual course of lectures, existed. Out of the elements of the old plan of medical pupilage, an admirable scheme has been gradually developing during the last few years, particularly in Boston, which is becoming more important with each returning season. These remarks are made in consequence of an examination of a printed Catalogue of the Students of the Tremont Medical School, of this city, which has evidently established a reputation that could only have been acquired by the indefatigable exertions of all the instructors. Order, the foundation of success, is a characteristic of this thrifty, though quietly conducted institution. From the period of its organization, in 1838, to the present moment, no relaxation in carrying on the plan of exercises has occurred. The advancement of the pupil, from one step to another, is pursued with a devotion to his interests, proportioned to the weight of responsibility that will rest on him when he becomes a practitioner. Exer-

cises in theory and practice, clinical medicine, obstetrics and diseases of women and children, anatomy and physiology, surgery, clinical surgery and chemistry, are pursued uninterruptedly till the lectures of the medical college commence in autumn, when three or more examinations take place weekly, on the subjects of the professors. By the printed catalogue, the classes appear to have been increasing from year to year, till the names of forty-three were registered the present season. This evidence of the popularity of the school, exhibits the confidence of the public in the personal efforts of those on whom devolves the labor of instruction.

In referring thus particularly to the Tremont Medical School, we would by no means have it understood that we are not equally interested in other private schools of the city, engaged in the same elevated pursuit. The receipt of a printed pamphlet, containing the names of the students and teachers in the above-named school, together with a plan of instruction, led to an examination of its history, objects and prospects, which we might not otherwise ever have known, and we take the liberty of suggesting to other instructors to make known the state of their schools in the same way. It would be a convenience to friends, to the students themselves, and to medical strangers who may be in the city.

Medicated Baths.—Mr. May's advertisement, in this Journal, is a guide to his very elegant establishment in Cambridge Street. To be certain of the effects which could be produced by his apparatus, we passed through the process last week—not with a whole skin, for all that is superfluous is absolutely taken off in the bath. In rheumatic diseases, it must be admirable; and so of many other complaints known to physicians as particularly obstinate. Besides the excellency of the baths, when prescribed for invalids, it should be remembered that the house is also open as a private hospital, where medical gentlemen of the city can have their out-of-town patients cared for and nursed in the best manner. This will be felt to be a convenience, and we therefore hope that the place, and its capacity for accommodating strangers sojourning in town for medical advice, will be duly appreciated.

Practice of Medicine.—If the physicians of the United States are prone to write, it is also true that they generally exert themselves to do it well. It will be granted, without hesitation, by the readers of American Journals, that our physicians are unwearied in the collection of cases, and in recording the results of personal observation. Occasionally, a bold, energetic practitioner strikes out a new course, and surprises us by the extent of his professional erudition, exhibiting the national characteristic of bracing his propositions by such evidences as the phenomena of diseases furnish those who watch their varying shades. Of this class is Dr. Geo. B. Wood, of Philadelphia, a professor in the University of Pennsylvania; who, although known extensively as one of the authors of the *Dispensatory*, has surprised us with the magnitude as well as brilliancy of his researches in practical medicine. Two large octavo volumes, under his name, are fresh from the press of Messrs. Grigg, Elliot & Co., Philadelphia. Without particularizing subjects, it is allowable to say that the whole work is written in a calm, dignified style, that commands our respect, and impresses the reader very favorably, even before he has examined one half of the leaves. Dr. Wood may, perhaps, be handled with some freedom by foreign reviewers,

but an enemy would feel guilty of doing a mean act, who should attempt saying what was unjust about this praiseworthy achievement. Readers who can only slide over the surface, without dipping down deep into the reasonings of an author, will not be pleased with this profound treatise, because it requires an exercise of the intellect which they have not the organization for sustaining. The reader of Dr. Wood must think and digest, as well as read, or he will derive no advantages from the perusal. Some authors, like snow in sun-shine, melt away on being exposed to a medico-literary atmosphere, while others grow firmer under the pressure of the severest criticism.

Ticknor & Co. have copies, where those taking an interest in the progress of practical medicine, will find it on sale.

Indian Doctors.—All the Indian doctors and doctresses, who swarm on our sea-board, are sturdy impostors. From a personal examination and inquiry among some of the far-off western tribes, made in 1844, with reference to ascertaining what medical skill the American Indians really possess, we came to the conclusion that they could neither ascertain the cause or character, or prescribe for any disease, upon common-sense principles. The following recent efforts of some of the Chippeway faculty, published by a resident near them, corroborates our own observations. When the medicine man, who is also a profound wizard, does undertake the office of physician, the patient is placed in a lodge or wigwam made very secure from the observation of those outside. "The doctor having thoroughly examined him, and become sufficiently advised as to the locality of the disease, from the position of the pains, &c., proceeds to screwing up his drum, to give it the tone suitable for the case, to placing the proper number of rattles in his medical gourd-shell, to sacrifice some tobacco to the devil to induce him to withdraw his evil influence (believing the good spirit to be always willing to favor them), and to take from the sacred medicine bag (generally some skin fantastically trimmed off with ribbons and beads) those stones and minerals which, when brought to view of the patient, infuse into him that salutary and believing state of mind, so necessary to a beneficial effect of the doctor's supernatural exertions which are to be made in his behalf. The doctor next works himself into a limber and pliant state of body by means of a steaming operation, with water and hot stones.

"If the disease is confined to any particular part of the body, the doctor applies a hollow bone to the spot, and endeavors by sucking to remove the object which occasions the suffering, believing it to be a piece of stone, iron, or some substance thrown into the person's body by the magic art of an enemy. If the seat of the malady is not satisfactorily ascertained, but diffused, generally, the only cure is by a faithful and unceasing drumming and rattling, until the patient is either dead or acknowledges some relief, and begs for quarter. The doctor presently produces to the patient a piece of glass, iron or stone, and assures him that it came out of his body; upon which the patient feels easier and soon recovers, especially if the disease is hypochondriacal in its nature.

"The effect of their system of doctoring upon children is most ruinous, some dozen of them having been drummed out of existence in as many days, while at Lapointe, Wisconsin, waiting for their payment. While I am writing there are three of their drums in operation in as many lodges for sick children; two coffins have been made since last evening, for children

who have been drummed to death in that length of time. One of these operators had a child sick, and after exerting his power and skill, to no effect, called in two brother doctors, saying to them that he knew their power was greater than his, and that they could save the child, for 'he could almost do it himself.' They fell to work, and in a few minutes, when the father saw the child dying, he told them that their power was 'less' than his, and seized a drum, and went to drumming most furiously around and over his child, which he discovered to be dead, whereupon he set up a most piteous lamentation."

Infantile Diseases.—Mr. Roper, of Thornton, Heath, describes two cases of disease terminating fatally in infants, the nature of which was not ascertained clearly in the first, even by a *post-mortem* examination; and in the second, only in consequence of the autopsy having been made. The symptoms in both cases were regarded as indicative of gastro-enteric irritation, and were treated accordingly, with at first some improvement, which, however, soon ceased. In the first case, the only appearance of disease discovered after death, besides emaciation, was a mottled appearance of the kidneys. The other viscera were healthy. In the second case, which, in addition to the signs of gastro-enteric irritation, was characterized by a trifling cough, some little oppression of breathing, and a pallid countenance, death occurred suddenly. The abdominal viscera were healthy, as were also the lungs; the heart was at least twice the usual dimensions, with hypertrophy of the parietes; valves sound; the pericardium contained about half an ounce of serum; some of the mesenteric glands were enlarged. The little patient, a male, was about four years old.—*London Lancet*.

The Quarantine at Grosse Isle, Montreal.—If this establishment was ever of use, which we much doubt when we consider its origin, that use is unquestionable now. A very large immigration is daily arriving, with an unusual amount of sickness; one vessel alone losing as many as 70 on the passage. The principal diseases are smallpox and typhus, of the latter of which the ship fever is a malignant modification. By a letter received from Dr. Douglas, the medical officer, we learn that there are 700 sick at the present moment on the island. The duties proving too onerous for one, he has lately received the assistance of three other physicians. Tents have been sent down for the accommodation of 10,000 persons; and infected vessels are compelled by an order of Council to serve a quarantine of ten days, during which a thorough ventilation and cleansing are at the same time effected.

As far as this city is concerned, precautionary measures are being adopted. Although we may be permitted to doubt whether we will have during the summer more than the average of typhus which prevails among the immigrants, yet prudence has caused the erection of temporary hospitals at the "sheds" for the especial accommodation of such fever cases as may arrive at our port.—*British American Journal of Medical Science*.

Post-mortem Examination of a Case of Psoas Abscess, complicated with Morbus Coxarius. By CHARLES W. STEVENS, M.D., St. Louis.—The subject of this case was Joseph M'Neil, of this city; he had been visited

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by many physicians of the place, and it is for this reason, and on account of the rare complication, that I consider it of sufficient consequence to make a report of the *post-mortem* appearances:—Found the body much emaciated, and upon the middle of the anterior surface of the thigh, an opening, from which issued fetid pus. On exposing the posterior surface of the abdominal cavity, found a large sac extending along the course of the psoas magnus muscle; opening this, and tracing upwards, we found the bodies of the second, third and fourth lumbar vertebrae in a carious condition; the body of the third was completely destroyed. The lower extremity of the sac terminated in a sinus passing through the crural arch; making an oblique incision upon the anterior surface of the upper extremity of the thigh, found the capsular ligament, synovial membrane, and ligamentum rotundum, completely disorganized, and the head of the femur, with the whole acetabulum, in a state of caries; a portion of the os pubis was also in the same state, at the point where the sinus passed over it. A sinus extended from the joint, meeting the other sinus near the opening upon the thigh. The patient had been attended, just prior to his death, by Drs. Sykes and McMartin, and I had not seen him till invited to make the examination. A full report of the case would form an interesting article for publication.—*Missouri Medical and Surgical Journal.*

Medical Miscellany.—Mr. Burnett, Tremont Row, has imported a few of those beautiful compound microscopes, which are useful in an eminent degree to naturalists and medical philosophers.—Professor Morehead, of the Chair of Theory and Practice in the Ohio Medical College, Cincinnati, has resigned his place.—Sickness among the troops at Santa Fe was subsiding at the last intelligence.—It is gravely asserted that a person is now living on Long Island, N. Y., who is 150 years old! A woman was living in Russia, last year, if we recollect rightly, 160!—Dr. Nargas has been elected Vice President of Venezuela.—By a decree of the Landrat of Glaris, in Switzerland, all young men are interdicted from marriage before they are 22 years of age, and the females before they are 20.—The number of births in the British metropolis, in the first week in May, was 1,276, of which 622 were male, and 654 female. The number of deaths was 983—503 male, and 480 female.

MARRIED.—At Hartford, Conn., Joshua Wallace, M.D., to Miss A. L. Shippen.—At Washington, D. C., Dr. John L. Fox, U. S. N., to Miss M. E. Morris.

DIED.—William Phillips, M.D., late of Bristol, Bucks Co., Penn., 24.—At Hinsdale, Mass., Dr. Abel Kittridge, a good physician and a benevolent man, 74.—At *Sainte de Ste Marie*, Dr. Hugh T. Prouty, of Monroeville, Ohio, drowned by passing over the Falls.—At Guayaquil, Dr. J. J. Olmedo—a man of such high repute that funeral honors were declared by the President in token of general esteem.

Report of Deaths in Boston—for the week ending June 26th, 78—Males, 42—females, 36—Stillborn, 5. Of consumption, 9—typhus fever, 22—scarlet fever, 2—lung fever, 3—brain fever, 1—childbed, 1—infantile, 3—scrofula, 1—disease of the hip, 1—disease of the bowels, 3—disease of the heart, 1—Inflammation of the lungs, 2—Inflammation of the bowels, 3—mortification, 1—intemperance, 1—scalds, 1—dropsy, 2—pleurisy, 4—accidental, 1—dropsy on the brain, 3—convulsions, 1—diarrhea, 1—worms, 1—marasmus, 1—debility, 1—cancer, 1—dysentery, 1—old age, 1—tumor, 1—rheumatic fever, 1—hooping cough, 1.

Under 5 years, 23—between 5 and 20 years, 8—between 20 and 40 years, 24—between 40 and 60 years, 17—over 60 years, 6.

Army Medical Statistics.—The British and Foreign Review quotes the following observations in a review of "French Military Memoirs." They might afford some useful suggestions at the present moment, when the improved condition of the English soldier is so much an object of solicitude:—"We know that the mortality of the army weighs particularly upon the young conscripts; that it is increased by the change of garrisons; that it is greater in some places, as in Paris, or in localities affected by epidemics, than in others; but medicine has scarcely contributed to these results; they almost all belong to the labors of the administrative department. And if we are asked what are the most common diseases, and in what proportion do they attack soldiers, according to their age, length of service, distribution, their former profession, and a thousand other circumstances, we can only give approximative data, which might very easily be rendered certain, if we collected observations of the diseases. What one man could not do, several, by their co-operation, might easily accomplish. Our profession does not admit of repose; and in the intervals of practice we ought to strive unceasingly to increase our knowledge, and to extend the sphere of our usefulness."

"In military medicine, especially," says M. BEGIN, "statistics ought, as regards the modes of recruiting, the race of men, their regimen, drill, clothing, dwellings, removal from one climate to another, to lead to precise results, which it would be impossible to procure with the same degree of certainty in any other way. Figures, as has often been remarked, are inflexible, and cannot speak falsely; but we must exert ourselves to collect them, and group them according to their analogies; we must require from them only legitimate conclusions, and must bear in mind that the greater the numbers the more surely will the errors arising from negligence, or individual accidents, be cancelled, and truth predominate in the general result."

A Substitute for the Vapor of Ether to annul Sensation during Operations. By DR. DAURIOL.—At midsummer, when vegetation is at its height, *solanum nigrum*, *hyoscyamus niger*, *cicuta minor*, *datura stramonium*, *lactuca virosa*, are gathered, and a sponge is plunged in their juice freshly expressed. The sponge is then dried in the sun, the process of dipping and drying is repeated two or three times, and the sponge is then laid up in a dry place.

When the sponge is required for use, it is soaked for a short time in hot water; afterwards it is placed under the nose of the person to be operated upon, who is quickly plunged into sleep, more or less deep, according to the susceptibility of his nervous system. The operation may then be proceeded with, without any fear that the patient has any sensation of pain. He is readily aroused from the stupor by a rag dipped in vinegar, and placed to his nose.

M. Dauriol records five cases in which he has successfully employed this means of bringing about insensibility during operations.—*Journal de Toulouse.*

Painless Surgical Operations.—It has been announced that a Committee is in progress of formation "to award some suitable recompense" to the discoverers of the newly-found remedy for the prevention of pain, and to take into consideration the propriety of appealing to the public.—*Lancet.*